

A Master Thesis, presented as part of the requirements for the Award of a Master Degree in International Marketing Management from the NOVA – School of Business and Economics.



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A project carried out for the Master in International Marketing Management Program, under the supervision of:

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Abstract

This Master Thesis describes the internal and external processes used to find the best BM that combines bicycles and human powered energy. Following a practical Roadmap, an idea named We-Cycle has been developed into a healthy and sustainable charging phone station, that can be used for brand activation purposes and data collection while entertaining and increasing the users' experience as well as their engagement.

Keywords

Human powered pedal energy, Charging phone station, Brand Activation, Data Collection

Attesting Authorship

As author, I, Hannah Nunes Yahiaoui, do hereby declare that the attached Master Thesis, titled "We-Cycle" has been entirely written by the undersigned without any assistance from third parties. Furthermore, I confirm that all sources (printed, electronic, personal) used have been indicated in the thesis itself. Any sections quoted from these sources are clearly declared and indicated with the sources explicitly cited. Furthermore, I declare that I have included any acknowledgment of the name(s) of any person(s) consulted in preparing this thesis.

Unless otherwise stated, no parts of this work have been published before submission.

Abbreviations

B2B:	Business to Business
B2C:	Business to Customer
BM:	Business Model
BMC:	Business Model Canvas
BML:	Build-Measure-Learn
BP:	Business Plan
CB:	Company Building
CC:	Customer Creation
CD:	Customer Discovery
CDM:	Customer Development Model
CSR:	Corporate Social Responsibility
CV:	Customer Validation
FMCG:	Fast Moving Consumer Goods
LSM:	Lean Startup Method
MVP:	Minimum Viable Product
NGO:	Non-Governmental Organization
NOVA SBE:	University Nova School of Business and Economics
R&D:	Research and Development
USP:	Unique Selling Proposition

Vocabulary notes:

Customers:	Companies, venue owners and agencies that pay for We-Cycle
Users:	Smartphone users that utilize We-Cycle for free
Clients:	Users that become clients of the customers (mentioned above)

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**Bigger versions available in the appendices*

1. INTRODUCTION

Today's world is not the same as yesterday and not the same as tomorrow. Humans, energies, technologies are constantly changing, and creating new opportunities as well as new challenges. Living in an increasingly tech-savvy society, smartphones are now part of the human's primary needs, making them dependent of internet connection and electricity to charge their phone's batteries. While resources (like electricity) are becoming more scarce and transitioning to renewable energies, digital disruption, the "Internet of Things" and Data are on the other hand, getting more important and more complex as well.

Constantly connected, having access to any information any time, consumption has grown and became part of the human's daily life. In order to make the difference in this competitive and consumerist market, brands need to think ahead and innovate. Consequently, marketing is transitioning to a more data-driven strategy in order to address customers' needs, and create the best customers experience, the core of any brand's competitive advantage.

Seeing an opportunity in those facts, this Master Thesis intends to explore a personal idea addressing these challenges by developing a healthy and sustainable human powered pedal energy solution.

2. RESEARCH STRATEGY

After crossing Portugal from North to South by bicycle last year and starting a Master Degree in International Marketing Management, a personal and entrepreneurial idea that combines Marketing and bicycles started to grow.

Understanding the opportunity this Master Thesis provided to learn and experiment; the aim was to be as realistic and concrete as possible in turning that idea into a business by developing a more practical Master Thesis rather an academic one.

2.1 Research Question

To make a business out of this personal and entrepreneurial idea, the following research question has been established: What is the best Business Model (BM) that involves human powered pedal energy, meaning the combination of bicycles and human powered energy?

2.2 Research Methodology

To answer that question, a practical research methodology has been developed into a Roadmap, inspired by the Customer Development Model (CDM) created by Steve Blank and the Lean Startup Method (LSM) by Eric Ries.

2.21 Customer Development Model (CDM)

The CDM's main goal is to identify and understand the customers and their problems, in order to develop the right product together with marketing and sales plans (Figure1), (Mars, 2011).

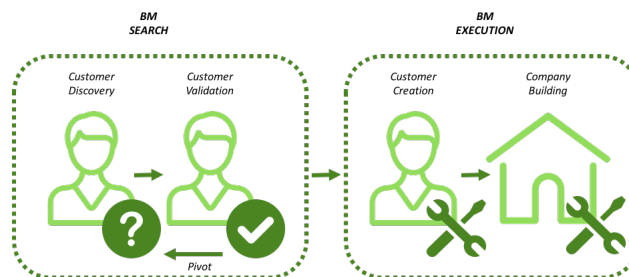


Figure 1: Customer Development Model (Blank, 2010)

This model is divided in two distinct phases, the “BM Search” and the “BM Execution” (Appendix CDM 2.21). The “BM Search” (first) phase includes “*getting out of the building*” in order to do the Customer Discovery (CD), which helps to identify the customers and understand their problems. Then, follows the Customer Validation (CV), which focuses on “*developing a replicable sales process*” in order to determine if your BM is scalable and repeatable. Once CD and CV have been validated and “Exit”, the “BM Execution” phase occurs with the execution of the BM (validated in the BM Search phase). It includes the Customer Creation (CC), with the scale execution and the Company Building (CB) with its scale organization and operations (Blank, 2010).

Note that the CDM is a non-linear model because of its iteration process, meaning that startups *“will move back and forth between CD and CV several times before proceeding to the execution”* (Anastasia, 2015)

Due to this project’s early stage, the Roadmap took mainly inspiration from the initial phase (BM Search) of the CDM, in order to discover the customers and later validate them.

2.22 The Lean Startup Method (LSM)

The other method used as inspiration for the Roadmap is the LSM from Eric Ries. This method *“favors experimentation over elaborated planning, customer feedback over intuition, and iterative design over traditional “big design up front” development”* (Blank, 2013). The LSM is often illustrated by the the Build-Measure-Learn (BML) loop (Figure 2).

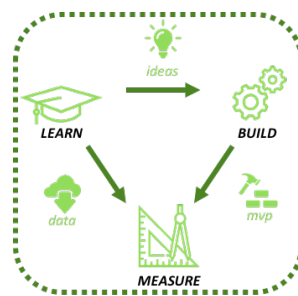


Figure 2: Build-Measure-Learn Loop (Ries, 2011)

This loop, divided in three main steps, aims to test an early version of an idea in order to get customers’ feedback and adapt it consequently. Thus, any Startup following the BML loop, needs to first transform its idea into something real and “Build” a Minimum Viable Product (MVP) out of it. Then, they have to *“get out of the building”* in order to “Measure” the customer’s reaction, understanding and behavior towards their MVP. Once those two steps have been accomplished, the Startup needs to “Learn” from its own experiment. This means that the Startup has to collect data from the “Measure” step and analyze it in order to adjust, change, and develop a better BM to *“have something that customers love”* (Blank, 2013). The BML loop can be repeated as much as necessary in order to develop the best BM.

Consequently, by taking inspiration from the LSM, the Roadmap intended to maximize learnings in order to answer the research question.

2.3 Research Roadmap

As previously mentioned, the Roadmap used as a practical research methodology, aimed to internally explore, evaluate, select, develop and externally validate a (human powered pedal energy) BM, by collecting key learnings, before proceeding to the next steps (Figure 3)

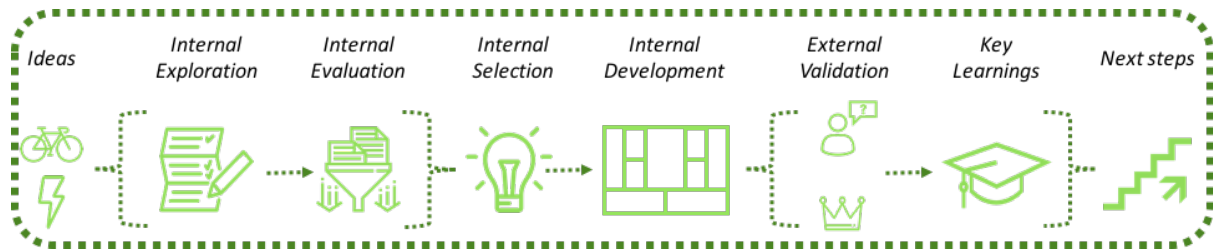


Figure 3: Research Roadmap (Own Research, 2016)

The internal processes started with the exploration of numerous human powered pedal energy ideas, followed by an internal evaluation, which funneled the initial ideas into one. Then, the idea selection and development, including a Business Model Canvas (BMC), helped to define and assess how to create value.

Once the internal steps were concluded, it was time to “*get out of the building*”. Thus, external validation was utilized, through the conducting of interviews in order to collect valuable data and critical feedback from experts and potential future customers. As a result, the analysis of the feedback, inputs and validations (from the interviews) have been summarized into key learnings and integrated in order to validate and adjust the initial BMC. Finally, the “Next steps” were established including observations and an execution plan.

3. RESEARCH RESULTS

3.1 Internal exploration

An initial and personal brainstorm about bicycles and human powered energy resulted in more than twenty-five ideas. These included anything from “cinema by bike”, “Christmas tree lighting up by bikes” and “bike smoothie makers”, and they have been classified in three categories (Appendix Ideas 3.11). These categories: Entertainment, Health and Social, allowed to arrange and structure the ideas accordingly (Table 1). For instance, “eco fitness” would sit

within the Health category, while the “concert powered by bike” would fall under the Entertainment category and the idea “bike as a machine for home and small businesses” would be considered a Social project.



Table 1: Categories overview

3.2 Internal evaluation

After organizing the ideas, they underwent through an internal evaluation. (Figure 4).

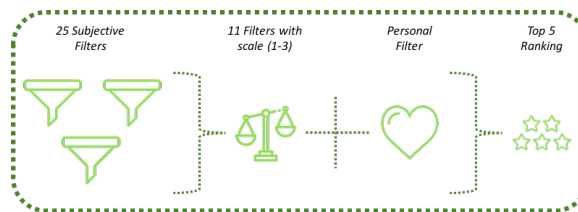


Figure 4: Internal evaluation (Own Research, 2016)

A range of twenty-five subjective filters, which would act as funnels, were established to narrow the initial list. The goal was to cast a glance at each idea in order to get a first impression about essential attributes i.e. potential feasibility, interest or level of technical know-how (Appendix Subjective filters 3.21). From there, the weighting and evaluation of each idea remained complex. Consequently, the ideas passed through eleven more objective filters by adding a scale of 1-3 (1 being a negative answer or impact and 3 a positive one) (Appendix Filters with scale 3.22).

This scaling process being impersonal, another filter has been added, representing my own personal interest and motivation in developing the idea (with a double point scale of 2-6 in order to leverage the weight of the idea in the final ranking) (Appendix Ranking 3.23).

After analyzing the "top 5" ranking, the ideas were regrouped into three focused categories: Charger Devices, Outdoor Events and Social Entrepreneurship (Appendix “top 5” 3.24).

3.3 Internal selection

To select the “one and only” idea, a last filter was applied in order to determine which of the three categories were “solution to problem” driven (Figure 5).

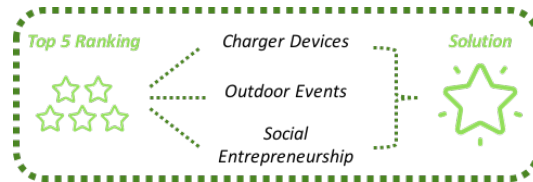


Figure 5: Internal selection (Own Research, 2016)

To develop a product or service, the most important is to solve a problem (Oppong, 2014). Similarly, an entrepreneurial product or service launch should be viewed as a “Pain Reliever” (Osterwalder, 2014). The problem posing as a pain for the user (and customers), while the product introduced as a solution, attempts to alleviate this pain. Consequently, the charging devices’ idea is considered as a solution to a common problem.

In fact, by 2017, one third of the population will own a smartphone (Statista, 2016). Additionally, a UK study revealed that 66% of the population is “Nomophobic” (SecurEnvoy, 2012), with several cases identified in for instance in Portugal (Durand, 2013). The term “Nomophobia” stems from “no-mobile phobia” and implies that a person gets anxiety when their devices are about to run out of battery and would do anything to solve that problem. Thus, the human powered pedal charging device is considered as an alternative, healthy and sustainable solution to any smartphone, tablet or electronic devices’ user who needs to charge it for free, when they don’t have access to a conventional plug.

As a result of all the internal mentioned processes an idea about human powered pedal energy has been internally explored, evaluated and selected. It will be now developed and further externally validated in order to collect key learnings before proceeding to the next steps.

3.4 Internal development: We-Cycle

As explained, the idea is an alternative and free solution to charge smartphones while pedaling. However, in order to transform it into a financially sustainable business, the focus was on

developing it as a B2B solution (for customers) and not as a B2C solution (smartphone users).

The main reason is that a person (smartphone user) would not be willing to pay and exert a physical effort to have his phone charged when he has other free solutions like plugs or portable batteries. Thus, as B2C solution it implies non-monetized revenues from the users.

On the other hand, customers (i.e. companies, venue owners, agencies) invest in marketing and brand activation campaigns and this creates an opportunity to generate revenue.

Consequently, as a B2B focused solution it was named We-Cycle.

From this point on, “users” will refer to smartphone or any electronic device users in general and “customers” to the companies, venue owners and agencies.

As a multi-functional solution for both users and customers; “We” in the name, refers to the union of the charging product + brand activation and data collection services and the “W” recalls the watts generated while pedaling. “Cycle” comes from bicycles as well as the cycle of re-using the energy we are producing while pedaling.

To have a full understanding of We-Cycle, the concept can be divided in two distinct parts: as a product and as a service (Figure 6).

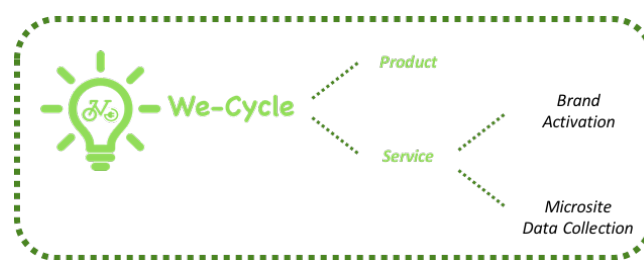


Figure 6: We-Cycle concept

3.41 We-Cycle as a product

As a product We-Cycle represents an entertaining substitute to an unavailable or inaccessible charging device (plug or USB) destined to any smartphone users. To illustrate, it is a static bike system on which you sit, pedal and by doing so, charge your phone (Appendix Bike charger 3.411). Technically, it is a model that allows collecting and using the energy generated by the wheel when a person pedals. That energy is collected via the motor/generator saved in the

battery and used to charge a smartphone at the same rate as a regular plug (Appendix Technical information 3.412). That human powered pedal product is a self-sufficient, healthy and sustainable way to create, re-use and transform energy in order to charge any electronic devices. In addition to this, accessible in out/indoor spaces and being an entertaining charging station, it increases the user experience. Lastly, it can be adapted into premium, designed or simple prototypes (Appendix Charging devices 3.413).

3.42 We-Cycle as a service

As a service, it is an alternative solution for all kinds of brand activations (i.e. marketing campaigns, promotions, advertising and events related) as well as for data collection through a microsite attached to the We-Cycle's support.

a) Brand Activation

As a brand activation solution, We-Cycle offers a healthy, sustainable, and engaging branding support. Strategically displayed in high density locations, We-Cycle increases the customer's brand visibility and awareness (i.e. in business hubs, airports, train stations, parks/pedestrian's places). The service represents a double-edged return on investment for the customer: not only does it have a positive perception impact together with high visibility, it creates engagement from the users and attracts potential future clients (Appendix Printed branding support 3.421).

b) Microsite and Data Collection

Additionally, We-Cycle allows the customer to collect data from users through a microsite available on an electronic support (tablet or touch screen) attached to the We-Cycle support (Appendix Microsite 3.422).

We-Cycle also offers a tailored and "on demand" personalized microsite, that the customer can define and determine depending on its brand activation's positioning, targets, objectives and preferences.

This microsite is an added service of the We-Cycle solution. It was developed and integrated in order to enhance its competitive advantage to a common charging device and branding tool and is the We-Cycle's Unique Selling Proposition (USP).

Once the users start pedaling on the We-Cycle support to charge their phone, the We-Cycle's tablet turns on and a pop-up window asks for a login to proceed and navigate in it. It can be done via any social media account or personal email, and that is when the data starts to be collected. Upon access to the microsite on the built-in tablet, and after login-in and accepting the common condition terms, users are automatically giving access to their profile with its basic demographic, geographic and psychographic information.

The amount and type of the data collected depends on the objective of the customer, its campaign and the microsite's personalization. For instance, a customer in the health industry could provide an interactive check-up or a health related microsite that could allow the logged-in user to see its progression, calories burnt etc. while pedaling. Thus, this company would collect information (i.e. about their age, gender, lifestyle etc.) and "capture" them by offering a discount for a specific product of their brand as a reward for their pedaling performance. Another example could be a customer willing to increase its Corporate Social Responsibility (CSR). By encouraging the users to come and pedal for a social/charitable cause, the customer would increase its database and later gain potential new clients together with a positive brand perception. Lastly, a customer in FMCG industry could engage the users to pedal and interact on the microsite in order to collect as many "watts" as possible and win a discount on their next purchase or a special prize.

Consequently, the users would become potential future clients of the mentioned customers.

In other words, users are likely to be incentivized to consume, or purchase from the customer due to the cognitive experience which is a competitive advantage. For example, they will remember how happy they were when they won a special trip, they will recall the customer's

brand with a positive perception over the effort they had to put into pedaling and using the microsite.

In order to develop the We-Cycle idea into a Business, a BMC has been designed.

3.43 Business Model Canvas (BMC) Design

Alexander Osterwalder invented that (BMC) strategic tool based on 9 building blocks, which allows to describe, design, change, and test a Business Model (Osterwalder, 2010) (Appendix BMC 3.431). Therefore, several BMC's drafts were designed and regrouped into a first compiled version in order to be externally validated (Table 2).

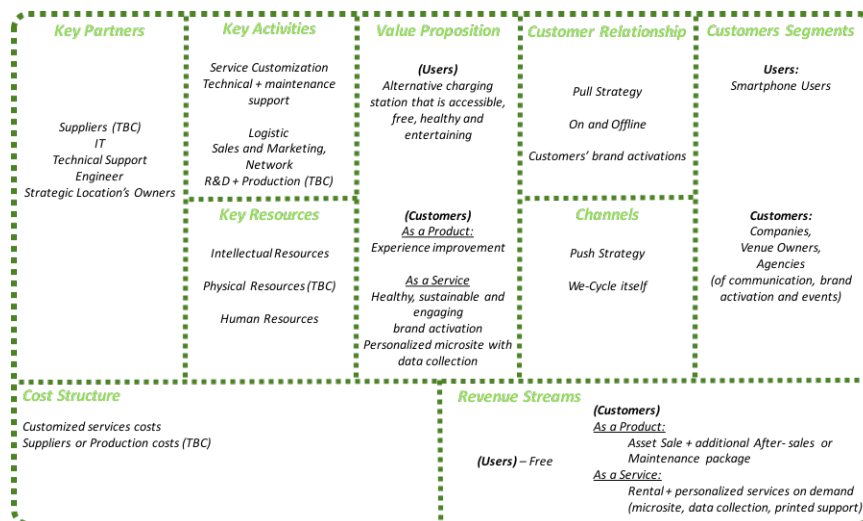


Table 2: First BMC compiled versions

a) Multi-sided BM and customers segments

We need to be aware that We-Cycle is a multi-sided BM due to the fact that the customer's block is divided in two interdependent segments, meaning that they cannot exist without the others (Osterwalder, 2010). These segments are the users, which own smartphones and the customers, which include companies, venue owners and agencies.

On one hand, the users utilize the We-Cycle product for free in order to charge their phone. On the other hand, the customers pay for the We-Cycle product and/or services. Thus, both segments are interdependent as customers are willing to pay for the We-Cycle solution only if the users use it.

b) Value proposition

Every business needs to explain how it creates, delivers and captures value (Maurya, 2014).

As Alexander Osterwalder explains it, in a multi-sided BM each of the segments has his own value proposition and revenue stream (Osterwalder, 2010).

Consequently, We-Cycle offers distinguished value propositions and revenue streams (further detailed) for both the users and the customers.

- **For the Users**

The BM of We-Cycle is able to create value for users by providing an alternative and healthy solution to charge their phones. It also delivers value by making it a free accessible and actively entertaining charging station.

- **For the Customers – As a product**

The value proposition of the We-Cycle's BM as a product is the experience's improvement. A venue owner (customer) would pay for the We-Cycle solution to increase its own customers (later called clients) experience. By offering its clients free access to a healthy and entertaining product, the venue owner would make its clients' experience memorable and unique. For example, a venue owner could display for free the We-Cycle product for its clients in common areas such as the reception of a hotel, a waiting room or the hall of a university. Thus, the venue owner's clients would be able to benefit from the We-Cycle product and entertain them (i.e. while waiting).

- **For the Customers – As a service**

The We-Cycle's BM as a service creates value for the customers by offering a healthy, sustainable and engaging brand activation solution along with a customized microsite that collects data. It also delivers value by offering tailored and personalized services included in the microsite design and the printed branding support.

Additionally, it captures non-monetized value from the users like data, engagement, awareness, which brings no direct revenue, yet remains an essential part of the value proposition for the customers. As a result, companies and agencies (customers) would pay to reach a substantial amount of users who could be converted into their potential future clients. Moreover, the

flexible and customized microsite experience allowing data collection and user's engagement, represents the core of its competitive advantage.

To sum up, the value proposition for the users is a free, accessible, entertaining and healthy alternative to charge their phone. For the customers, the value proposition as a product increases their own customer experience, and as a service it offers a tailored, and multi-faceted brand activation solution that collects data, increases user's engagement, customer's brand visibility and awareness all in an entertaining, sustainable and healthy way.

c) Channels and customer relationship

We-Cycle will be initially communicated via a "Push" strategy in order to get its first customers. Once a customer will display it in his own venues, or use it for brand activation, the product will "speak" by itself and attract users as well as new customers. This further leads to the customer relationship, with a "Pull" strategy. Customers will reach We-Cycle via offline channels (i.e. by using it or seeing it in specific locations) along with online channels such as websites, social media and with past customers' brand activations.

d) Revenue streams

As for the value proposition, each customer's segment involves different revenue streams.

- From the Users

As previously mentioned, users would not be willing to pay and exert a physical effort to have their devices charged when there are other free and effortless solutions. Thus, the users' revenue stream being free, brings no direct revenue. Nevertheless, as earlier explained, it generates non-monetized value (part of the customers' value proposition).

- From Customers – As a product

The revenue stream generated by the venue owners (paying for We-Cycle as a product) will be made by the asset sale. A venue owner would purchase the We-Cycle solution and display it for its clients in order to increase their (clients) experience and be part of its brand identity.

The revenue stream will be then generated by a one-time transaction by selling the asset.

Once the transaction is completed, an after sales assistance or a maintenance package (monthly/yearly) would be recommended and sold in order to increase the revenues.

- **From Customers – As a service**

As a service, the revenues will firstly be made by renting the We-Cycle's charging support to companies and agencies that wish to use it for brand activation. In addition to this, the personalized printed branding support and data collection services integrated in the microsite will be rented as well to increase the revenues.

For instance, an agency willing to use it as a charging station only for a punctual event, can choose to rent the charging support (including or not), the personalized printed branding support and microsite. Another example would be a company willing to rent it during a one-month campaign. Depending on the customers' goals and needs a full package for the renting service could be sold including the printed branding support, microsite development, and data collection. Or, a tailored proposal could be also considered including a price per log-in, per user reached, per watts generated etc.

- e) **Key partners, resources and activities**

Relationships with a range of international and local companies have been established as well as suppliers, technicians, designers, manufacturers and strategic location's owners (i.e. shopping malls). They could officially become key partners, and further facilitate the execution plan.

As key resources We-Cycle will have intellectual resources including the microsite and data collection development (with patent). Additionally, the product and support itself (initially outsourced via its key partners) could later be internalized and be part of the physical resources. As key human resources, We-Cycle will have a team of different expertise' profiles, including engineers, developers and a sales and marketing team.

The key activities, would depend on customized services delivery with the microsite design and development, printed branding support, data collection, etc. The technical and maintenance

assistance and the logistic will also be part of the key activities. The sales and marketing development of We-Cycle and its network will be part of it as well. Lastly, if not outsourced, the Research and Development (R&D) as well as the production could also be part of the key activities.

f) Cost structure

The cost structure would mainly be driven by the customized services costs and the We-Cycle's outsourced support or eventually the support's production costs if not outsourced (Appendix Initial suppliers' prices 3.432). It would also include services costs like marketing, after-sales, logistic and support as well as basic fixed costs.

As a result, a first BMC has been developed in order to be externally validated.

3.5 External validation

Qualitative validations were prioritized over quantitative ones, and as We-Cycle focused on developing a B2B solution, this external validation favored the customers' feedback.

This external validation has been established by conducting in depth one-on-one interviews, mostly made in Portugal because of the location and network's accessibility. The goal was to test and validate the We-Cycle idea together with its BMC's components among the interviewees. For this first external validation, the pricing has not been tested due to the non-applicability (for the interviewee's market) of the initial supplier's prices and to the non-availability of the potential local partnership's prices. Finally, as support for the external validation, a storyboard presentation, has been designed (Appendix Presentation 3.5).

3.51 List of interviewees

An initial list of different (customers) profiles including venue owners, agencies and companies from different industries has been created in order to validate the We-Cycle idea. To strengthen the validation process, another list of experts was added. This second list included managers that work in marketing, communication and branding, which could give a more technical and experienced feedback concerning brand activation and marketing campaigns (Table 3).

To maximize the chances to conduct interviews, the two lists were mainly built within the NOVA SBE's Mentors and Career Advisor's local network (Appendix List 3.51).

Despite the interviewees' provenance, they all tried to give global feedback without taking Portugal as reference and as a targeted market.

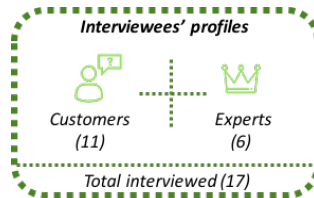


Table 3: Interview List summary

3.52 Interview structure

The interviews, were divided in three parts and the We-Cycle storyboard presentation was adapted accordingly to the interviewee's profile and industry (Figure 7). An interview guide has also been created to structure the interviews (Appendix Guideline 3.52). The interviews were then transcribed and later collated to obtain qualitative data.

Names are not recorded due to the confidentiality and sensitivity of the material.



Figure 7: Interview structure (Own Research, 2016)

As a result, the external validation process has been completed and the feedback summarized into key learnings and validations, both detailed in the next section.

3.6 Key Learnings

Overall, the interviewees showed a strong interest in the We-Cycle solution and validated the majority of BMC's components (Appendix Interview insights 3.61 and validations 3.62). They also added relevant inputs mainly about the customers segments, value proposition and revenue streams (Table 4).

Customers Segments		Value Proposition		Revenue Streams		Additional Inputs	
Validation	Key Learnings	Validation	Key Learnings	Validation	Key Learnings	Validation	Key Learnings
✓ Segments' inter-dependency	<ul style="list-style-type: none"> We-Cycle's Users utilization NGO as segment 	<ul style="list-style-type: none"> ✓ User experience ✓ Brand activation ✓ Data collection 	<ul style="list-style-type: none"> Gamification Rewards 	<ul style="list-style-type: none"> Renting revenue 	<ul style="list-style-type: none"> Yield management Hybrid revenue model 	<ul style="list-style-type: none"> ✓ Potential real customer 	<ul style="list-style-type: none"> Location Market

Table 4: Main validations and Key learnings

3.61 Customers segments

a) Validation: Multi-sided BM

First of all, the interdependency of the user and customer segments has been validated.

The majority of the interviewees confirmed that they were interested in using the We-Cycle solution only if a numerous amount of users utilizes it.

b) Key learnings: Users

Regarding the users segment, half of the experts (E.1 and E.4-5) affirmed that it is important that the users come to pedal in order to collect data. They added that the users should get more than their phone charged in order to pedal and use the microsite (that collects data).

In fact, with 42% of the Europeans that never exercise and 64% of the Portuguese population being inactive, the interviewees (I.2a, E.1, E.4, E.5), were convinced that the users in general (independently from their nationality) would want to get an additional reward (besides their battery charged) to use the We-Cycle support and the microsite (European Commission , 2014). It could come from a simple free coffee to discounts on their next purchase, to a huge one-month competition to win a TV.

Consequently, the importance of the users segment towards the utilization of We-Cycle should later involve an external testing and validation in order to evaluate their perception, utilization, and experience towards the We-Cycle support and its microsite.

c) Key learnings: customers

Looking closer at the customers segment, the distinction among the venue owners, companies and agencies have been clearly validated as well as their revenue model (further described).

On the other hand, another segment appeared to be as relevant as the others, which are the Non-Governmental Organizations (NGO). As two of the interviewees (I.3 E.3) expressed, NGOs could be seen as another segment involving a specific value proposition and revenue model. NGOs could be sponsored by a company to rent or purchase the We-Cycle solution for a social/charitable cause. Thus both the NGO and the company will benefit from brand exposure and visibility.

Consequently, for the next steps, the NGO as segment should be validated as well as companies' interest in becoming their partner or sponsor.

3.62 Value proposition

a) Validation: user experience and brand activation

The We-Cycle' value propositions were clearly validated and thirteen out of the seventeen interviewees showed a strong interest in paying for the We-Cycle solution once developed. They also confirmed the user experience, brand activation and data collection (via the microsite) as the most important value propositions no matter if they were willing to purchase or rent the We-Cycle solution. Moreover, they said that, We-Cycle being original, healthy, sustainable and entertaining would clearly increase their own customers experience and that they would also use such solution rather than a classical one for brand activation purposes.

b) Validation: tailored microsite and data collection

From an expert's standpoint, the data collection integrated in the personalized microsite has been validated as the USP from We-Cycle. *"Customers would use We-Cycle mainly for the tailored microsite to collect data for their brand and marketing campaigns... We-Cycle would also allow them to join the offline touchpoint with an online interaction"* (E.1)

c) Key learnings: microsite

Concerning the microsite, one of the customers and half of the experts (I.2a, E.1, E.4, E.5) recommended to incorporate gamification and/or a reward system into the microsite, as Dell and Marks & Spencer used gamification to engage their customers, collect data and capture new ones (Hobbs, 2015). In addition to this, they also confirmed that it would increase the

user's engagement and interaction, which will help to get more data (being beneficial for the customer). Especially in an increasingly tech-savvy society, locations where people need to wait (waiting rooms, airports) would benefit from it.

Lastly, companies should integrate gamification into their marketing strategy in order to increase their brand loyalty and engagement (Boykiv, 2015).

3.63 Revenue streams

The interviewees (E.1-6, I.11) confirmed that, by purchasing the We-Cycle tool, the venue owner would be using it to increase its own customer experience. However, by renting We-Cycle the company would use it as an engaging and punctual brand activation solution.

a) Validation: revenue maximization

All the experts confirmed and validated that to maximize the We-Cycle's revenues, the best option is to rent the We-Cycle services, allowing repeated revenues instead of selling the We-Cycle product, being a one-time transaction. They also agreed to add another full package or separated price for the tailored services (printed branding support, microsite and data collection) in order to maximize revenues.

b) Key learnings: yield management

As (I.2b, E.1) recommended, yield management should be used when renting the We-Cycle solution. A pricing strategy (i.e.) based on the seasonality and location could be beneficial to increase the margins and revenues. For instance, for a company using We-Cycle in a shopping mall during a Black Friday or Christmas, a higher price could be applied due to the location and high users' affluence during these days.

c) Key learnings: hybrid revenue stream

Finally, a hybrid revenue model has been highlighted for the agencies in specific. As (I.1, E.1, E.4) affirmed, agencies would either rent it as part of their offer for their own clients or buy it if they need it for several clients. Additionally, they would not necessarily use the microsite unless their clients are interested in it.

3.64 Additional inputs

The interviewees (I.3, I.5-9) often expressed their interest in having a “physical” prototype in order to try it before purchasing or renting the We-Cycle solution. One expert (E.2) also expressed that future companies would use it for a punctual and specific campaign and not several times in order not to kill the “wow” effect.

a) Key learnings: location

Some of the interviewees (I.2a, I.8, E.1, E.3) also added an important input regarding the location of We-Cycle. They affirmed that customers would be interested in using We-Cycle only if it is displayed in several and varied locations with a high human traffic. *“In order to increase your visibility, reach a lot of users and get data from them you need to be located in strategic places such as shopping malls, business hubs, airports, trains or metro stations ... This is a fundamental condition to increase the chances to capture a high number of future clients as well as to apply a different price per locations” (E.1).*

As the We-Cycle’s value for the customers *“depends substantially on the number of users”*, it is important to first have a varied list of We-Cycle’s locations (Osterwalder, 2010). Consequently, the more locations We-Cycle is present, the more visibility it has, the more users it can attract and the more offering it can give to the branding companies.

b) Key learnings: market

In terms of profitability, the experts (E.1 and E.5-6) mentioned that *“Portugal would not be profitable enough due to its small market’s size”* and the expert (E.6) added that *“Since the crisis in 2010, many companies based in Portugal faced difficulties, and had to cut their marketing budget”*. For these reasons, half of the experts (E.1, E.5-6) recommended to target a larger market like the Iberian Peninsula, or Northern Europe.

c) Validation: potential real customer

Last but not least, two of the interviewees (I.6 and I.9) were really interested in investing in the We-Cycle solution and asked for a proposal.

As a result, after analyzing the interviewee's feedback the initial BMC has been validated, and adjusted including the key learnings (Appendix BMC adjusted 3.63).

4. NEXT STEPS

After completing the external validation, some observations needed to be considered in order to define the execution plan (furtherly detailed). We-Cycle being a real and entrepreneurial project, some of the execution plan's steps are being simultaneously executed while writing this Master Thesis.

4.1 Observations

a) Users

As highlighted in the key learnings, the users' utilization towards We-Cycle's support, needs to be evaluated. Once the prototype is built, the users' external validation should be completed.

b) Microsite and Data Collection

The microsite and data collection should also be evaluated. Its functionality and design would be tested by both users and customers while the general experience, rewards and gamification systems would mainly be tested by the users in order to make it the most attractive and user-friendly. The data collection would have to be tested and validated by the customers only.

The microsite and data collection costs should be evaluated in order to either hire a full-time web developer or to do a partnership with a developer's agency that would work "on demand" for each new mandate. The choice would depend on the number of clients willing to use the microsite's services and the specificities. As the expert (E.4) said *"For example in Portugal, hiring a full-time web developer could be cheaper than contracting a local developer's agency only if you have a lot of demand"*.

c) Market

As most of the interviewees came from Portugal, some of the feedback may have been culturally and locally influenced, thus not applicable for other markets. To reduce the risks, We-Cycle's should target a bike-friendly market, like Denmark, Netherlands and France

(Colville, 2015). Nevertheless, the hypothetical correlation between the users' (bike-friendly) market provenance and the We-Cycle's utilization should be evaluated and confirmed as well. Finally, We-Cycle could base its production in Portugal "*The 3rd largest bicycle producing nations of Europe*", and further rent/sell it locally and internationally (Oortwijn, 2016).

4.2 Execution plan

Inspired from the CDM and the LSM, the practical Roadmap, helped to discover and validate the customers as well as the We-Cycle idea. To proceed with the We-Cycle's entrepreneurial project, the following execution plan has been developed and is currently being executed.

I. Funding

First of all, We-Cycle took the opportunity from (I.6 and I.9), the two "*Earlyvangelists*" in order to collect funding. This term (combining "*Early Adopters + Internal Evangelists*") has been invented by Steve Blank to describe these special kind of customers "*who are willing on taking the risk to do the "first launch" and that have the power to invest in it*" (Blank, 2010).

After proceeding to several meetings, We-Cycle is currently waiting for their investment's proposal in order to proceed to the next phases of the execution plan.

II. Prototype building

In the meantime, a local partnership is being concretized with a major bicycle manufacturer to proceed in the R&D and build the first prototype. Together with the local partner a R&D plan has been established including three major steps; We-Cycle's Design, Engineering and Prototyping. First of all, different We-Cycle's versions will be designed, including (if requested) some of the "*Earlyvangelists*" preferences. Then will occur the engineering phase, followed by the prototyping and "physical" testing. According to the local partner's experience, this whole process would last between three to six months (for a certain budget not yet estimated).

The microsite should be simultaneously developed. However, as the “*Earlyvangelists*” interest is on the charging support only, the microsite will be developed in a second phase with a future interested investor or with other funding.

III. Product testing

As soon as the first prototype is built, it will be used as the MVP in order to be externally tested, adjusted and validated among the “*Earlyvangelists*” and the other interviewed that requested a trial on a “physical” prototype before renting or buying it. After making the necessary adjustments, a “sales and marketing roadmap” (CDM) will be developed to confirm if there is a real product-market fit and if We-Cycle is a scalable and repeatable BM.

Lastly, in an optimistic scenario, We-Cycle will follow the next steps of the CDM with the Customer Creation (CC) and Company Building (CB).

In a less optimistic scenario, a “pivot” will occur, meaning one or several building blocks from the initial BMC will be changed and the modified concept tested again.

5. CONCLUSION

We all have great ideas, amazing solutions and extraordinary projects, but when it comes to transform them into a real business it is like riding a bicycle for the first time; you try it, fall down, learn from your mistakes and try again!

This metaphorical interpretation summarized what has been done for my personal and entrepreneurial Master Thesis’ project and what will be done afterwards.

The objective was to find the best BM that combines bicycles and human powered pedal energy.

To achieve that goal, a practical Roadmap has been designed. It included an internal ideas’ exploration, evaluation, selection and development followed by an external validation in order to collect relevant key learnings, adjust the BMC and further proceed to the next steps.

As a result of the internal processes, a multi-functional, healthy, sustainable and entertaining solution, for both users and customers has been created and named We-Cycle.

Being more than an alternative charging phone station, We-Cycle has been developed into a B2B solution that increases the users experience, while offering personalized brand activation and data collection services.

Proceeding with the external validation, the We-Cycle idea together with its BMC have been validated as well as the customers' interest. Venue owners are interested in purchasing the We-Cycle (as a product) to improve their own customer's experience and companies in renting it (as a service) for brand activation and data collection. Additionally, the rental revenue stream has been noticed as the most profitable especially if used with yield management.

Last but not least, as a rewarding conclusion, two Portuguese companies expressed a strong interest in investing in We-Cycle and decided to be part of the idea development. Furthermore, a local partner has also shown a strong interest in designing and producing the We-Cycle support and started elaborating a R&D plan.

As a result, a budget is currently being evaluated and estimated by the companies in order to finance the We-Cycle's R&D and build a first prototype.

Finally, once the prototype is built and functional, it will be tested and externally validated in order to proceed with the We-Cycle's project development and creation, hoping that next time your phone needs to be charged, you will be able to use We-Cycle!

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